



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: ALF 502L-2 BYPASS RATIO: 5.1
 UNIQUE ID NUMBER: 1TL001 PRESSURE RATIO (π_{00}): 13.2
 COMBUSTOR:
 ENGINE TYPE: TF RATED THRUST (F_{00}) (kN): 33.4

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	17.8	116.1	37.2	12.5
AS % OF ORIGINAL LIMIT	90.8	98.4	56.1	39.1
AS % OF CAEP/2 LIMIT (NO _x)			70.1	
AS % OF CAEP/4 LIMIT (NO _x)			72.0	
AS % OF CAEP/6 LIMIT (NO _x)			72.8	
AS % OF CAEP/8 LIMIT (NO _x)			77.8	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
 - DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.400	0.02	0.40	13.43	8.3
CLIMB OUT	85	2.2	0.324	0.02	0.30	12.03	12.7
APPROACH	30	4.0	0.117	0.18	3.97	6.47	8.7
IDLE	7	26.0	0.048	6.65	45.63	3.38	2.9
LTO TOTAL FUEL (kg) or EMISSIONS (g)			162	501	3527	1173	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				15.3	107.3	35.2	11.4
SIGMA (D _p /F ₀₀ in g/kN, or SN)				2.6	6.5	3.5	2.9
RANGE (D _p /F ₀₀ in g/kN, or SN)				13.2-18.2	101.5-114.3	32.7-39.2	8.1-13.5

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 20 (% CORE FLOW) AT 9.49kN POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.7
TEMPERATURE (K)	290-300
ABS HUMIDITY (kg/kg)	0.0094-0.0184

FUEL

SPEC	0.81
H/C	1.92
AROM (%)	19.7

MANUFACTURER: Textron Lycoming
 TEST ORGANIZATION: Textron Lycoming
 TEST LOCATION: Stratford, CT
 TEST DATES: 26/07/1982-21/09/1982

REMARKS

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)